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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, RJP A

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/524,730	Applicant(s) JACOBSEN ET AL.	
	Examiner Rip A. Lee	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 3 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03-13-06;02-16-05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of copending Application No. 10/523,828. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons set forth below.

Present claim 1 is drawn to a process for making a supported catalyst comprising: (i) mixing an organometallic compound and ionic activator, (ii) adding the mixture from step (i) to a support, and (iii) adding a transition metal compound, wherein the molar ratio of organometallic compound to ionic activator is in the range of from 0.1 to 2.0.

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Claim 4 of the copending application is drawn to a process for making a supported catalyst comprising: (i) mixing an aluminoxane and ionic activator, (ii) adding the mixture from step (i) to a support, and (iii) adding a transition metal compound, wherein the molar ratio of aluminoxane to ionic activator is in the range of 20 to 0.1.

The term "organometallic compound" includes the subset of "aluminoxane" recited in claim 4 of the copending application. The range 0.1 to 2.0 (instant claim 1) lies squarely within the range 20 to 0.1 (claim 4 of copending application). As such, the subject matter of the claims of the instant application are generic to, *i.e.*, fully encompass, the claims of the copending application, and therefore, the claims of the instant application are anticipated by the claims of the copending application

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Objections

1. Claim 3 is objected to because of the following informalities: Please replace "IIIB" with "IIIA." Appropriate correction is required.
2. Claim 9 is objected to because of the following informalities: Please replace "VIA" with "VIB." Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 14 and 15 do not set forth any steps involved in the method/process, and therefore, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any *active*, positive steps delimiting how this use is actually practiced. Since claims 16-18 depend from claim 14, they are subsumed under the rejection.

Claims 14-18 are also rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-8 and 10-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsushita *et al.* (U.S. 6,812,303).

Matsushita *et al.* teaches a process of making a catalyst comprising transition metal complex (A), mixture (B) of an ionic activator (B-1) and organometallic compound (B-2), a solid component (C), and optionally an organoaluminum (D). The molar amount of organometallic compound (B-2) is 0.05 to 20 times the molar amount of ionic activator (B-1). In the most preferable scenario, the molar amount of (B-2) is 0.2 to 0.8 times the molar amount of (B-1); see col. 26, lines 13-17. In column 31, lines 33-40, one learns to prepare the catalyst by contacting components (B-1) and (B-2) to form mixture (B), contacting mixture (B) with support (C), followed by contacting the resulting product with transition metal component (A).

Compound (B-2) is an organoaluminum of formula AlR_nX_{3-n} , of which triisobutylaluminum is exemplary (col. 25, lines 35-49 and col. 26, line 11). Ionic activators containing active hydrogen are enumerated extensively in column 24. The transition metal component is described in detail in columns 9 and 10. Note structure (3) in which constrained geometry group 4 complexes in which the oxidation state is +2 and X is a diene are described.

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The examples show use of $(t\text{-BuNMe}_2\text{Si})(\text{Me}_4\text{C}_5)\text{Ti}(\eta^2\text{-1,3-C}_5\text{H}_8)$. The solid support is silica (col. 27, line 26), the surface of which is dehydroxylated chemically by treatment with an organometallic species such as R_2Mg , or by calcining (col. 27, line 67 and col. 28, line 27). Catalysts are used for polymerization of ethylene alone or in combination with α -olefins such as 1-butene, 1-hexene, and 1-octene (col. 35, lines 32-36 and 43; examples show copolymerization of ethylene and 1-butene), and the process is amenable to gas phase, solution, and suspension polymerization (col. 35, line 60).

9. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita *et al.* in view of DeChellis *et al.* (U.S. 5,405,922).

The discussion of the disclosures of the prior art from the previous paragraph of this office action is incorporated here by reference. Matsushita *et al.* indicates that catalysts of the invention are used in a gas phase polymerization process, but the inventors do not describe the apparatus used for such an embodiment. DeChellis *et al.* teaches that a fluidized bed reactor is used for conducting gas phase polymerization process of polyolefins in the presence of metallocene-based catalysts. One of ordinary skill in the art, then, would have found it obvious to use a fluidized bed reactor described in DeChellis *et al.* as the reaction vessel for the gas phase polymerization taught by Matsushita *et al.* because this is shown to be a well-established process for conducting gas phase polymerization reactions. As such, one of ordinary skill in the art would have expected such a process to work.

Matsushita *et al.* teaches that any compound of formula $\text{L}_j\text{W}_k\text{MX}_p\text{X}'_q$ is suitable for use in the inventive process, however, there is no specific disclosure of group 6 complexes of type CpMX_n , as recited in claim 9. DeChellis *et al.* shows one species of metal complex having formula $\text{CpMR}_m\text{R}'_p$, where M is a group 4-6 transition metal and $m = 1-3$, $n = 0-3$, and $p = 0-3$ (col. 4, lines 22-27). One of ordinary skill in the art would have found it obvious to use group 6 metal complexes described in DeChellis *et al.* in the process of Matsushita *et al.* because this is a known species of the genus of compound disclosed in Matsushita *et al.*, and one having ordinary skill in the art would have expected all species within the genus to be useful in a process for polymerizing olefins. The combination is obvious because both disclosures relate to olefin polymerization.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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March 23, 2006


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